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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/995,181	11/28/2001	Masakatsu Matsui	R2184.0120/P120	9345

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EXAMINER

BATTAGLIA, MICHAEL V

ART UNIT	PAPER NUMBER
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2652

DATE MAILED: 05/10/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<p align="center">Office Action Summary</p>	<p>Application No.</p> <p>09/995,181</p>	<p>Applicant(s)</p> <p>MATSUI, MASAKATSU</p>	
	<p>Examiner</p> <p>Michael V Battaglia</p>	<p>Art Unit</p> <p>2652</p>	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 2 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 28 November 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☒ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-18 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-18 is/are allowed.
- 6) ☐ Claim(s) _____ is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 28 November 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3</u> . | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Specification

2. The disclosure is objected to because of the following informality. On page 5, line 10, the examiner suggests replacing "reached" with -it reaches-. Appropriate correction is required.
3. The lengthy specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Citation of Relevant Prior Art

4. Yamamoto (US 6,618,334) discloses a light amount control device comprising a light source driving means, an anterior signal level detecting means, a reference level value retaining means, a posterior signal level detecting means, and a drive current adjusting means, wherein the anterior and posterior signal level detecting means each have a first signal level detecting means that samples and holds the value of a second optical amount and a second signal level detecting means that detects an average value of light emitted from the light source using a low pass filter (Figs. 1 and 2). Park et al (US 5,881,044) discloses a monitor signal diode that receives a signal reflected from an optical recording medium and uses the signal to maintain the laser power in a constant range (Fig. 3). Suga (US 6,418,102) discloses using an optimum power control to find an optimum recording power and records the optimum power in a RAM so that it can be used as a

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reference value (Fig. 2). Yoshimoto et al (US 4,689,795) discloses a semiconductor laser controller that maintains laser intensity by comparing a detected laser power to a reference signal (Fig. 2). Yamada et al (US 4,796,267) discloses a laser control circuit that stabilizes the average laser output using a negative feedback loop (Fig. 1). Kenjo (US 5,029,155) discloses sampling and holding a detected write power level and compares the detected power level to a reference level stored in a memory to emit recording light of optimum value (Fig. 1).

Allowable Subject Matter

5. Claims 1-18 are allowable over the prior art of record.

In regard to claims 1 and 9, none of the references of record alone or in combination disclose or suggest a light amount control device and as information recording apparatus for recording information on a recording medium by irradiating a light from a light source, said light amount control device and said information recording apparatus each comprising: light source driving means for driving a light source to emit a light at a first optical amount level value and a second optical amount level value greater than the first optical amount level value; anterior reflected light signal level detecting means for irradiating the light emitted from said light source onto a recording medium and detecting a signal level value of the reflected light reflected by said recording medium before recording information on said recording medium; reference level value retaining means for retaining the detected signal level value as a reference level value; posterior reflected light signal level detecting means for irradiating the light emitted from said light source onto said recording medium and detecting a signal level value of the reflected light reflected by the recording medium after starting information recording on said recording medium; comparing means for comparing the detected signal level value with the reference level value retained by said

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reference level value retaining means; and drive current adjusting means for adjusting a drive current which drives said light source to emit the light based on a result of the comparison of said comparing means, **wherein each of said anterior reflected light signal level value detecting means and said posterior reflected light signal level value detecting means includes: first reflected light signal level value detecting means for detecting the second optical amount level value of the reflected light reflected by said recording medium; second reflected light signal level value detecting means for detecting an average value of the signal level value of the light emitted by said light source; and detection place selecting means for selecting one of outputs of the first reflected light signal level value detecting means and the second reflected light signal level value detecting means in accordance with an instruction for selection.**

In regard to claims 5 and 14, none of the references of record alone or in combination disclose or suggest a light amount control device and an information recording apparatus for recording information on a recording medium by irradiating a light from a light source, said light amount control device and said information recording apparatus each comprising: light source driving means for driving said light source to emit a light at a first optical amount level value, a second optical amount level value greater than the first optical amount level value and a third optical amount level value greater than the second optical amount level value; anterior reflected light signal level detecting means for irradiating the light emitted from said light source onto said recording medium and detecting a signal level value of the reflected light reflected by said recording medium before recording information on said recording medium; reference level value retaining means for retaining the detected signal level value as a reference level value; posterior reflected light signal level detecting means for irradiating the light emitted from said light source onto said recording medium and detecting a signal level value of the reflected light reflected by said

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recording medium after starting recording information on said recording medium; comparing means for comparing the detected signal level value with the reference level value retained by said reference level value retaining means; and drive current adjusting means for adjusting a drive current which drives said light source to emit the light based on a result of the comparison of said comparing means, **wherein each of said anterior reflected light signal level value detecting means and said posterior reflected light signal level value detecting means includes: first reflected light signal level value detecting means for detecting one of the second optical amount level value and the third optical amount level value of the reflected light reflected by said recording medium; second reflected light signal level value detecting means for detecting an average value of the signal level value of the light emitted by said light source; and detection place selecting means for selecting one of outputs of the first reflected light signal level value detecting means and the second reflected light signal level value detecting means in accordance with an instruction for selection, and wherein said drive current adjusting means includes means for adjusting the drive current supplied to said light source so as to cause said light source to emit the light at the reference level value in accordance with a result of comparison of said comparing means when said light source emits the light at the second optical amount level value, and for adjusting the drive current supplied to said light source so as to cause said light source to emit the light at the third optical amount level value in accordance with an efficiency value obtained by a relationship between a value corresponding to the second optical level value and a value corresponding to the drive current.**

Conclusion

6. This application is in condition for allowance except for the formal matters stated above.

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Prosecution on the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

A shortened statutory period for reply to this action is set to expire **TWO MONTHS** from the mailing date of this letter.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael V Battaglia whose telephone number is (703) 305-4534. The examiner can normally be reached on 5-4/9 Plan with 1st Friday off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hoa T Nguyen can be reached on (703) 305-9687. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Michael Battaglia



W. R. YOUNG
PRIMARY EXAMINER